

(54) Title  
CHAIR MEMBER COMPRISING TWO PORTIONS OF HIGH AND LOW DENSITY  
RESILIENT MATERIAL RESPECTIVELY

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AU 238342 40019/53 46.1  
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(57) Claim

1. A seat member for supporting a person sitting on a chair, said seat member including a forward support portion of relatively high resistance to resilient deformation and an adjacent rear support portion of relatively low resistance to resilient deformation, said forward and rear support portions defining a substantially transverse crevice therebetween such that, in use, the weight of a person sitting on the chair causes differential deformation whereby said rear support portion is resiliently deformed to an extent greater than said forward support portion thereby resiliently opening said crevice and locating the sitter's ischial

tuberosities substantially behind said forward support portion to resist forward movement of the sitter on the seat member by exerting a rearwardly directed pressure on said ischial tuberosities such that the sitter tends to be supported in an ergonomically correct posture.

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Complete Specification for the Invention entitled:

"A CHAIR MEMBER"

The following statement is a full description of this invention,  
including the best method of performing it known to me/us:-

- 1 -

Complete of PH6094 dated 26th May, 1986

TITLE: A CHAIR MEMBER

TECHNICAL FIELD

The present invention relates to chairs and in particular to a chair which enables the occupant to be seated with correct posture.

An occupant of a chair seated with correct posture should have his back relatively straight with the spine having a slight bow at its lower portion. Correct posture can prevent and alleviate back pain.

10 BACKGROUND ART

One known example of a chair which positions the occupant for correct posture is a chair having a seat which slopes forward. This ensures the occupant is positioned with a straight back. To complement the sloping seat, a knee rest can be provided to prevent the occupant from sliding forwardly off the seat.

One disadvantage of this known seat is that the pressure exerted on the knees can become uncomfortable after long periods of time.

It is an object of the present invention to provide an improved chair member which substantially overcomes or ameliorates the abovementioned disadvantages.

#### DISCLOSURE OF THE INVENTION

According to a first aspect of the invention there is provided a seat member for supporting a person sitting on a chair, said seat member including a forward support portion of relatively high resistance to resilient deformation and an adjacent rear support portion of relatively low  
10 resistance to resilient deformation, said forward and rear support portions defining a substantially transverse crevice therebetween such that, in use, the weight of a person sitting on the chair causes differential deformation whereby said rear support portion is resiliently deformed to an extent greater than said forward support portion thereby resiliently opening said crevice and locating the  
sitter's ischial tuberosities substantially behind said forward support portion to resist forward movement of the  
sitter on the seat member by exerting a rearwardly directed  
20 pressure on said ischial tuberosities such that the sitter tends to be supported in an ergonomically correct posture.

Preferably, the seat member is incorporated as the inclined or inclineable seat portion of a chair. However, it can also function as a portable or removable seat, cushion or back support. It may also be incorporated as a horizontal seat on a conventional chair.

Preferred embodiments of the invention will now be described, by way of example only, with reference to the

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accompanying drawings:-

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a sectional side elevation of a chair according to the invention showing a schematic skeletal occupant seated with correct posture.

Figure 2 is an enlarged sectional perspective view of the chair seat shown in Figure 1.

Figure 3 is a sectional perspective view of a cushion according to the invention.

#### 0 BEST MODE FOR CARRYING OUT THE INVENTION

Referring initially to Figure 1 of the drawings, a chair 1 according to one embodiment of the invention comprises an inclined seat 2 fitted onto a base 3. A back rest 4 may be provided to give additional support if required. The chair 1 is adjustable in conventional fashion to provide the required height and inclination of the seat 2 and the back rest 4.

0 As shown in Figures 1 and 2, the inclined seat includes a base 5 to which is attached a forward support portion 6 formed of relatively high density resilient plastics material. The base also supports a rear support portion 7 of relatively low density resilient plastics material located adjacent the forward support 6. The forward support portion is of relatively high resistance to resilient deformation whereas the rear support is of relatively low resistance to resilient deformation. In this



embodiment, both support portions are separately upholstered by a suitable covering 8. The covering 3 may be a single piece of material, conveniently divided and secured to the upper surface 9 of the base 5 by a transverse bar 10.

When an occupant 11 is seated on the chair member 2, as shown in Figure 1, the differing densities of the support portions results in differential deformation whereby the rear support portion 7 is deformed to an extent greater than the forward portion 6. This permits the occupant's ischial tuberosity 12 to be positioned behind the forward support 6, generally in the crevice 13 between the two portions. The forward support portion 6 thereby positively acts against the ischial tuberosity and comfortably resists the tendency of the sitter to slide forwardly off the seat.

Figure 3 shows a second embodiment of the invention in the form of a cushion 14 which may be portable and which can be placed upon a conventional horizontal bench or seat (not shown). The cushion 14 is similar to the seat 2 illustrated in Figures 1 and 2 but has an upper surface 15 which inclines rearwardly. The forward support portion 6 is correspondingly inclined and in this embodiment also defines a base for the cushion. The rear support portion 7 extends forwardly over the forward portion 6 to define a relatively soft and shallow covering 16 for the forward portion.

The principal of operation of the cushion 14 is the same as that of the chair 1. The cushion 14 may also be constructed in the manner shown in Figures 1 and 2 but with a suitably inclined upper surface.

Although the invention has been described with reference to specific examples, it will be appreciated by those skilled in the art that the invention may be embodied in many other forms.





THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A seat member for supporting a person sitting on a chair, said seat member including a forward support portion of relatively high resistance to resilient deformation and an adjacent rear support portion of relatively low resistance to resilient deformation, said forward and rear support portions defining a substantially transverse crevice therebetween such that, in use, the weight of a person sitting on the chair causes differential deformation whereby said rear support portion is resiliently deformed to an extent greater than said forward support portion thereby resiliently opening said crevice and locating the sitter's ischial tuberosities substantially behind said forward support portion to resist forward movement of the sitter on the seat member by exerting a rearwardly directed pressure on said ischial tuberosities such that the sitter tends to be supported in an ergonomically correct posture.
2. A seat member according to Claim 1 wherein said forward and rear support portions are separately upholstered.
3. A seat member according to Claim 1 or claim 2 wherein part of said rear support portion extends forwardly over said forward portion to define a relatively soft and shallow covering for said forward support portion.
4. A seat member according to any one of the preceding claims wherein said seat member has an upper surface



which, in use, inclines rearwardly with respect to the horizontal.

5. A seat member according to any one of the preceding claims wherein said support portions share a substantially flat base.

6. A seat member according to any one of the preceding claims wherein said forward support portion defines a base for said seat member.

7. A chair incorporating a seat member according to any one of the preceding claims.

8. A chair according to claim 7 wherein said seat member is inclined or inclineable.

9. A chair according to claim 7 or claim 8 further including back rest means.

10. A chair according to any one of claims 7 to 9 wherein said seat member is a portable cushion.

11. A seat member substantially as herein described with reference to the accompanying drawings.

12. A chair substantially as herein described with reference to the accompany drawings.

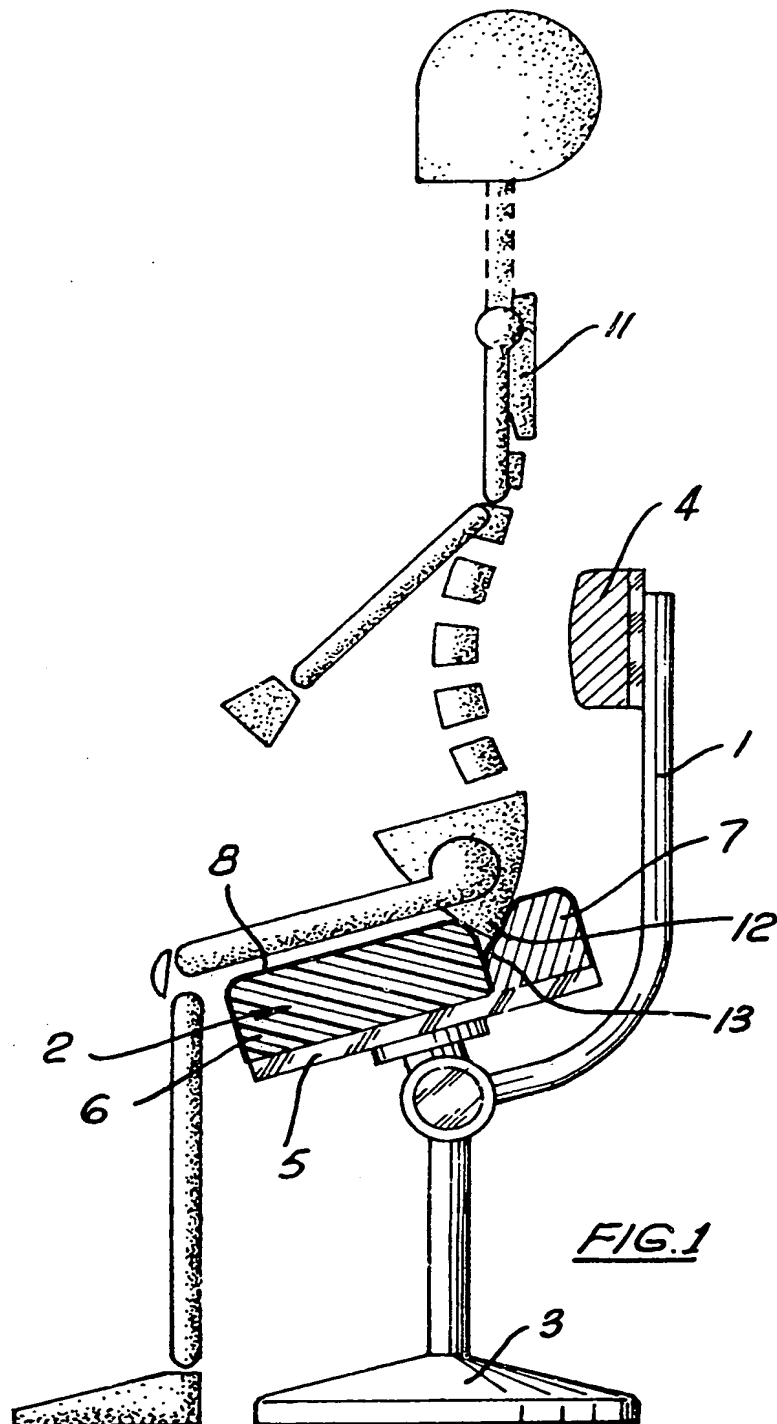
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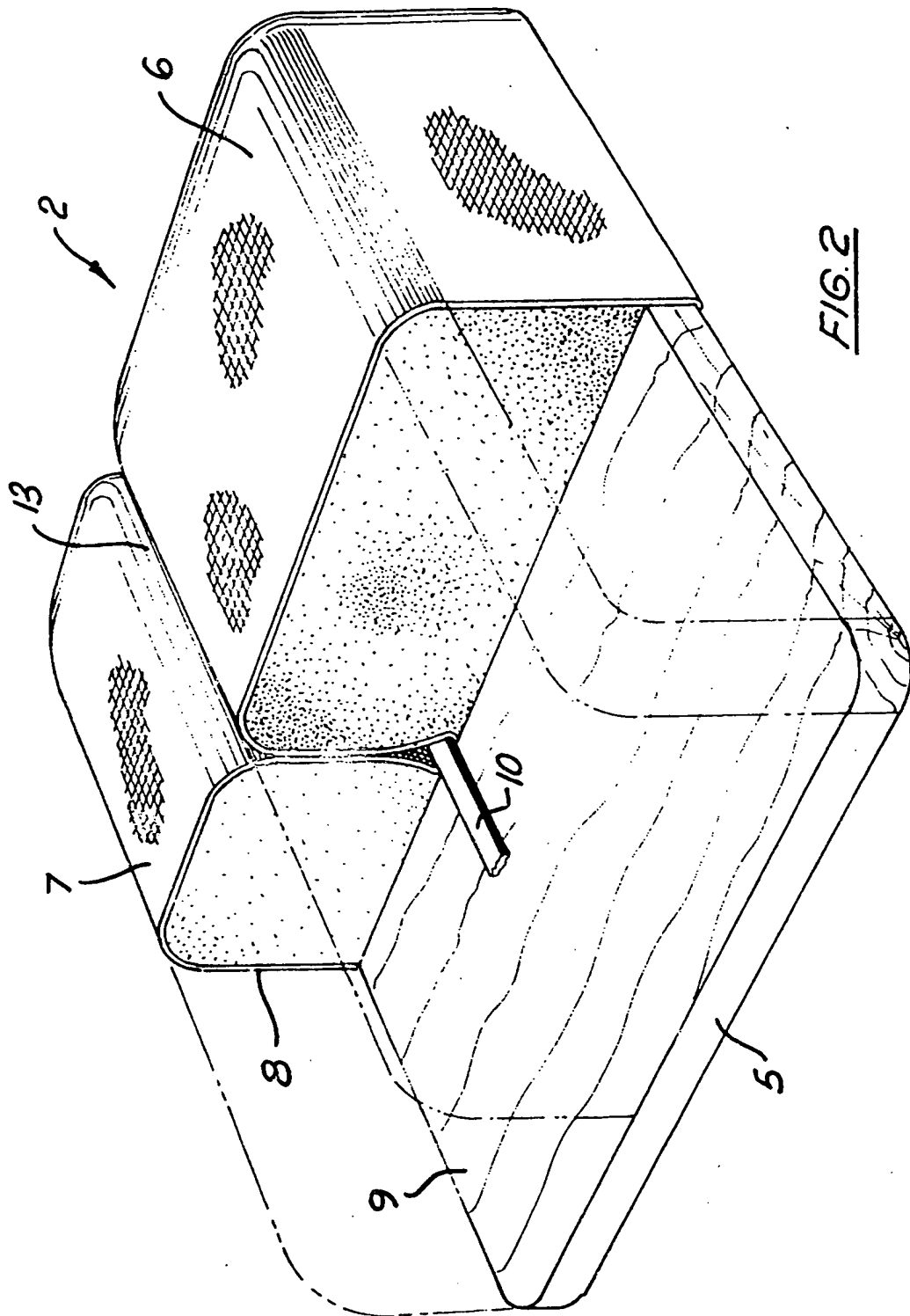


FIG. 2

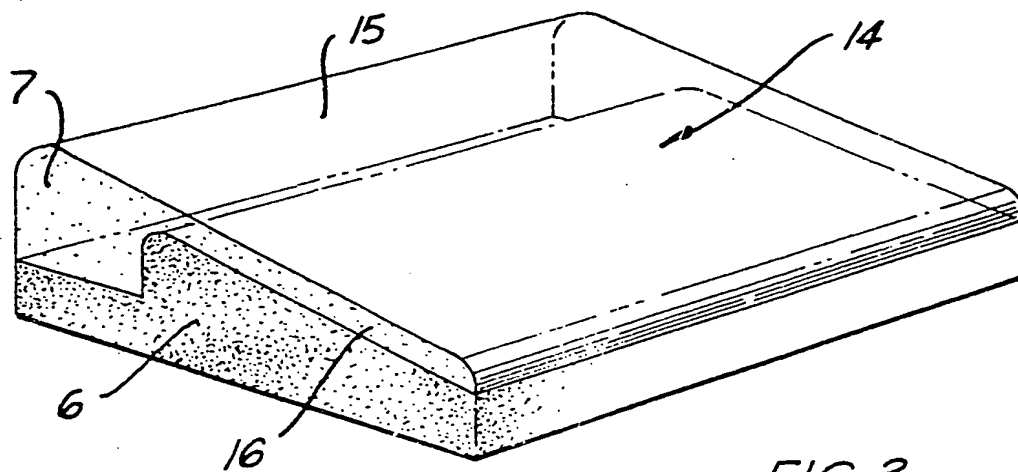


FIG. 3

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